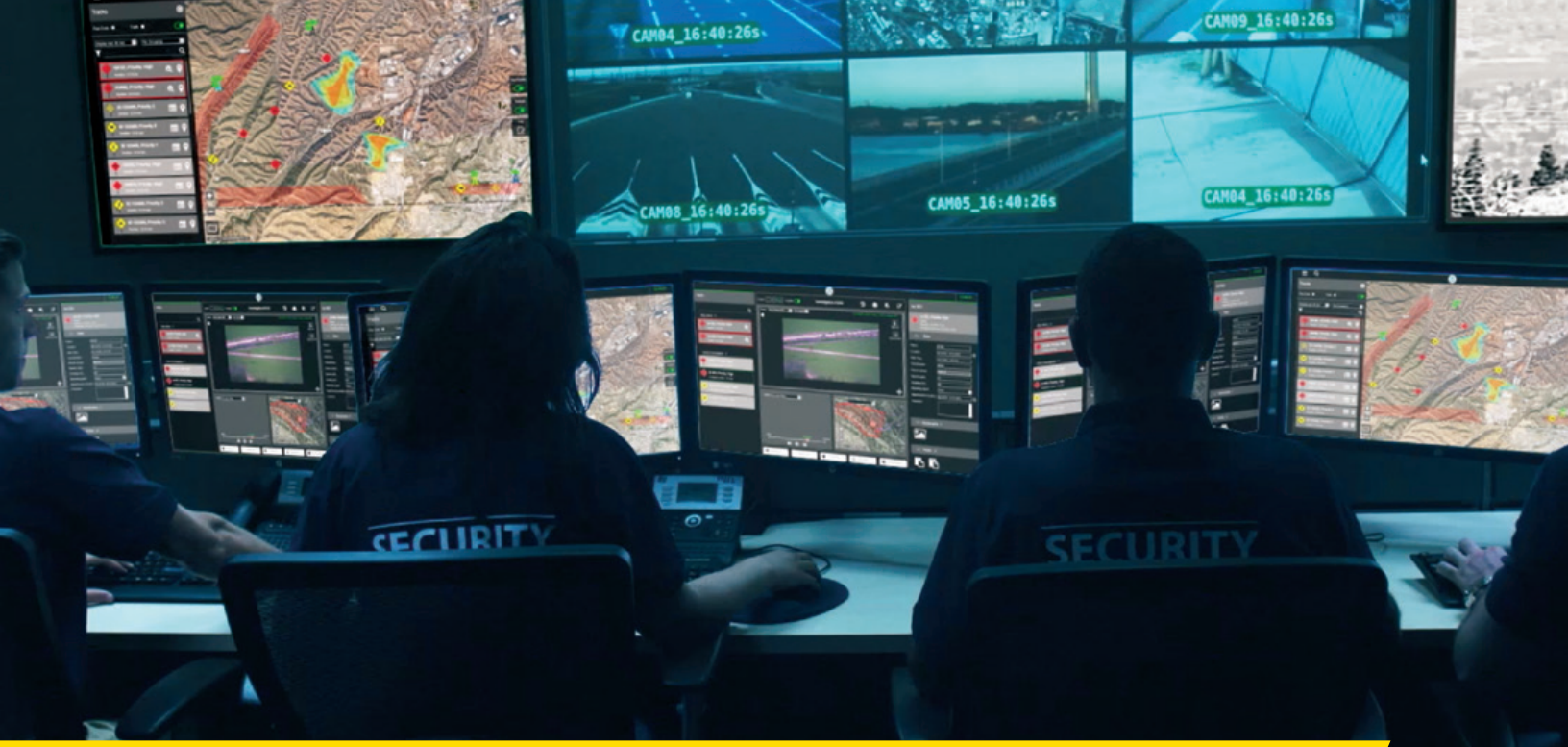
Torch-X™ BORDERS

Comprehensive border protection and command and control solution

Elbit Systems™
C4I and Cyber



Torch-X BORDERS

Comprehensive border protection and command and control solution

Elbit Systems' Torch-X Borders is a unified networked command and control (C^2) solution for border protection and homeland security. The solution provides planning and execution tools for multi-domain border protection with real-time regional surveillance, early warning, mission management and interception to enable effective incident control and rapid response 24/7, in all terrain and weather.

Torch-X Borders delivers a multi-layered solution for command and control centers, deployed command posts, and tactical patrol agents. The system provides real-time connectivity across the border-security array and allows optimum coordination of Intelligence, Surveillance and Reconnaissance (ISR) efforts and assets throughout the national territory operational zones and along the country borders.

Elbit Systems has the technology, know-how and real-world operational experience in the design, development, integration and deployment of effective, reliable and scalable border protection solutions, tailored to the unique operational requirements and geographical conditions of each customer.

Solution Overview

Torch-X Borders is based on an open architecture C⁴ISR application with sophisticated technologies that incorporates industry-standard mature components, including various sensors and tactical elements integrated into fixed, deployed and mobile platforms. The solution enables highly effective cross-force coordination, quick and precise planning and execution with effective sensor-to-interceptor capabilities. Torch-X Borders assists the decision-making process by recommending tasks to the decision makers based on all available data and in accordance with the rules of engagement. Imagery and data from all available sensors are fused and enriched, reducing operator cognitive load. The system automatically classifies and prioritizes threats and recommends the optimal interception methods. With a unified operational picture, a scalable toolbox of AI, machine-learning and tactical decision support algorithms, Torch-X Borders brings true multi-domain networked capabilities to the Border Security arena.

latforms

Deployed Platforms

TORCH-X™ borders

Open architecture infrastructure

Torch-X Borders is based on Elbit Systems' E-CiX, a fast and efficiently developed modular framework based on commoditized existing building blocks using industry standards, open architecture and offering its capabilities in "as a service" model.

Agile and scalable, the infrastructure easily interfaces with new or legacy sensors and systems, can accommodate third party applications and provides the development environment for future growth and modularity supported by cloud technologies and cost-saving COTS hardware.

Advanced C^{5}ISR application

Featuring a simple, intuitive and configurable web user interface, the application features an advanced communication framework and deployment solutions to establish a multi-layered ISR array integrating surveillance radars, day/night electro-optical sensors, fixed and mobile cyber intelligence sensors, unattended ground sensors, smart electronic fences, autonomous ground and aerial vehicles and mobile intervention units.

Using all the sensors and interceptors integrated into the system, the application generates a common real-time, reliable and accurate situation picture as well as effective incident control and rapid response.

Dynamic Network Connectivity in all modes of operation

Torch-X Borders incorporates Elbit Systems' high-performance secured communications solutions, transmitting voice, data and live video. The resilient and secure network achieves dynamic network connectivity, availability and flexibility compatible with public and military communication standards during routine and crisis situations. Torch-X Borders is compatible with COTS hardware and other communication systems, including customer legacy network solutions.

Unified Command and Control operational picture

Torch-X BORDERS

Comprehensive border protection and command and control solution

Key Features

- Support for manned and unmanned heterogeneous fleets of surveillance sensors and interceptors for vast area coverage
- Modular and scalable
- Situational picture based on AI tools and advanced decision support systems
- Simultaneous video streaming from numerous channels and imagery data exploitation
- Integration of fixed and mobile cyber intelligence sensors
- Optimized sensor-to-interceptor dialog
- Seamless integration of sensors, responders, manned and unmanned platforms and communication systems
- Cost-saving COTS hardware compliant

Operational Benefits

- Crisis analysis: Emergency procedure development, resource allocation and control
- Common situational awareness and operational language among different forces
- Abnormal activities monitoring
- Record and replay capabilities
- Real-time information sharing: Data, voice and live video
- Field-proven, secure and safe

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